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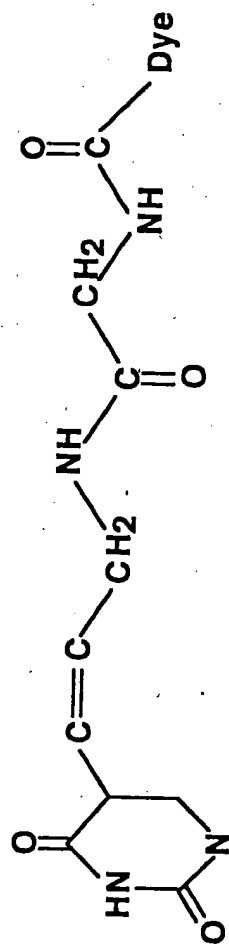
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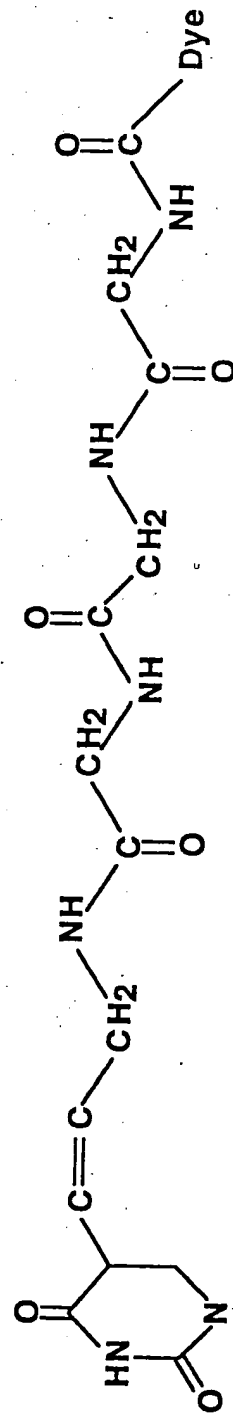
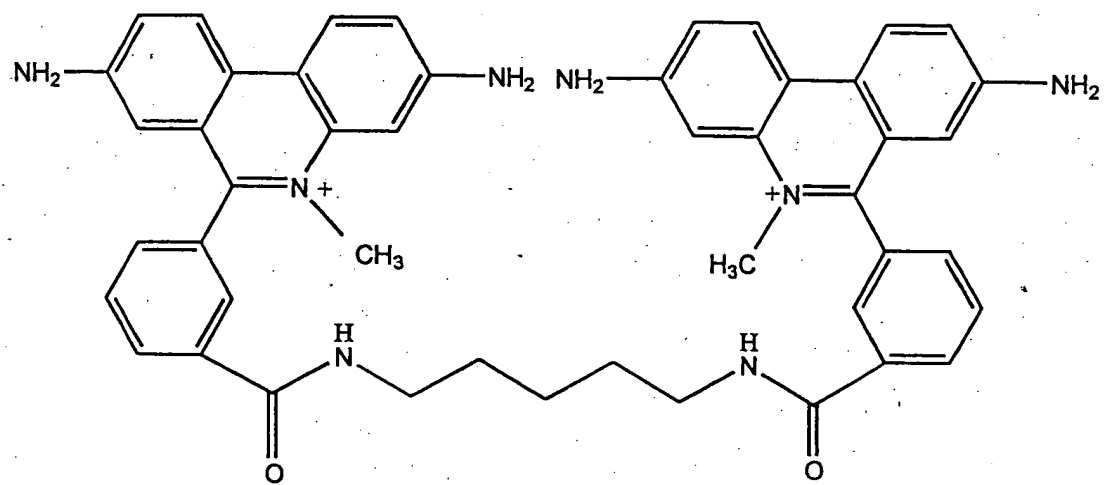
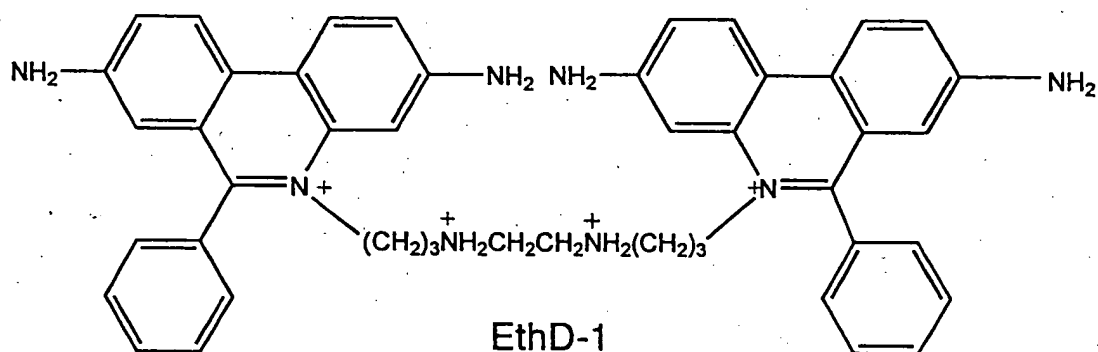


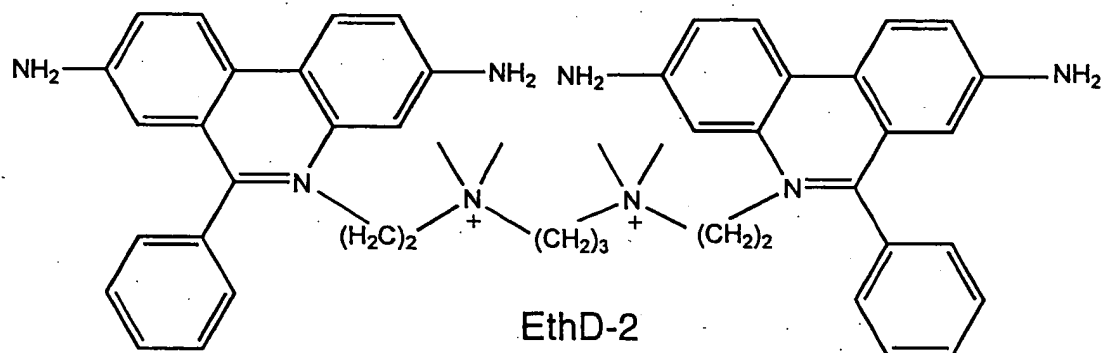
Figure 1



*meta*-EthD

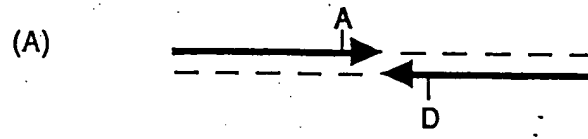


EthD-1



EthD-2

Figure 2



A = Energy Acceptor

D = Energy Donor

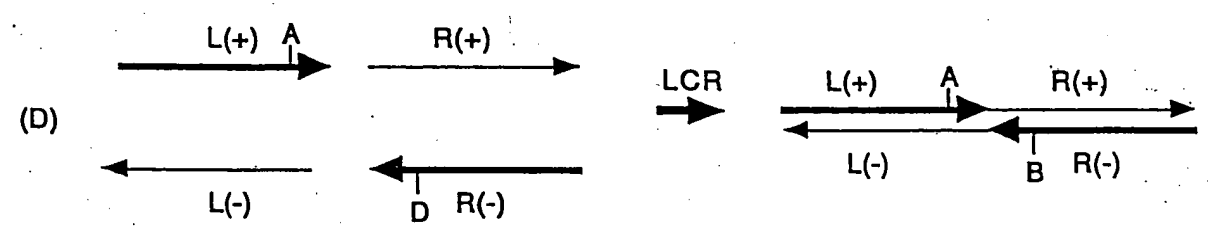
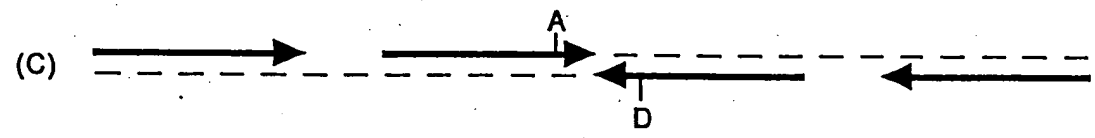
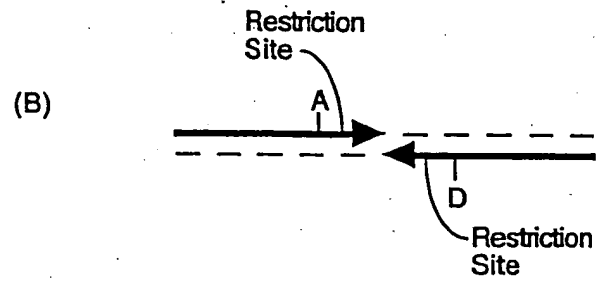


Figure 3

Target Sequence

—GCGACCTGCGAATGCTATGGATCAGGCTAGCCA—  
—CGCTGGACGCTTACGATACCTAGTCCGATCGGT—

(A)

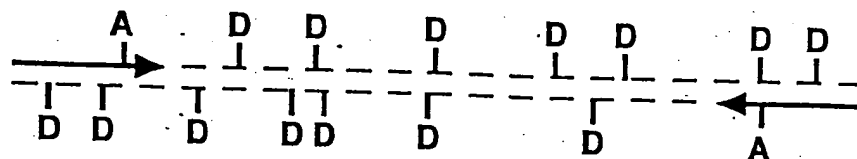
Donor  
↓  
GCGACCTGCGAATGCTATggatcaggctagcca  
cgctggacgcttacgataCCTAGTCCGATCGGT  
←  
Acceptor

(B)

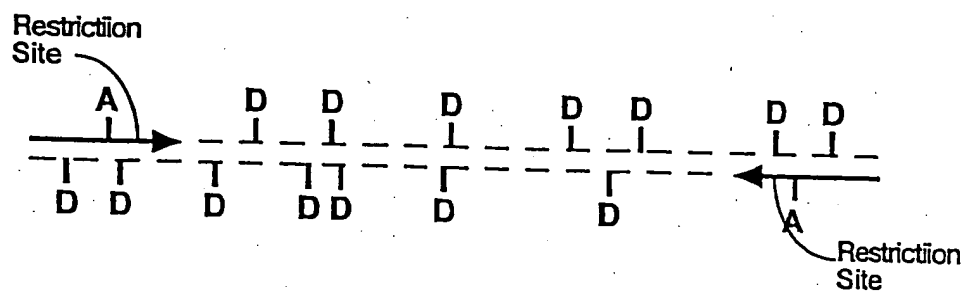
Donor  
↓  
GCGACCTGCGAATGCTATggatcaggctagcca  
cgctggacgcttacgatacctAGTCCGATCGGT  
←  
Acceptor

Figure 4

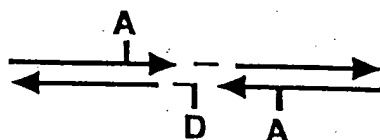
(A) PCR



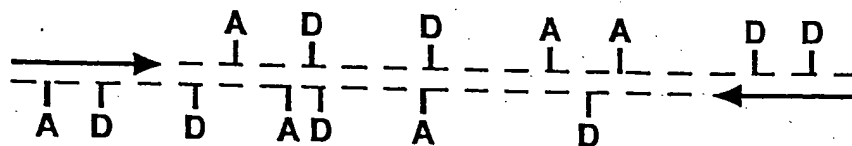
(B) SDA



(C) GAP-LCR



(D) PCR

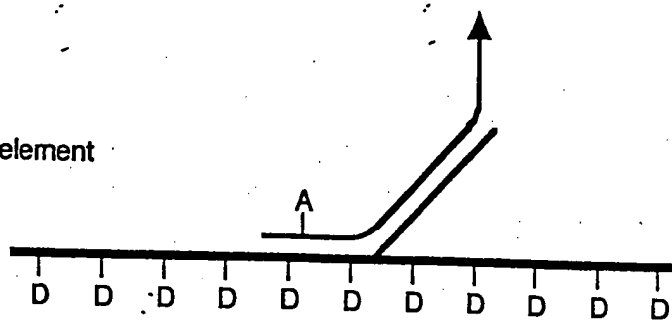


A = Energy Acceptor

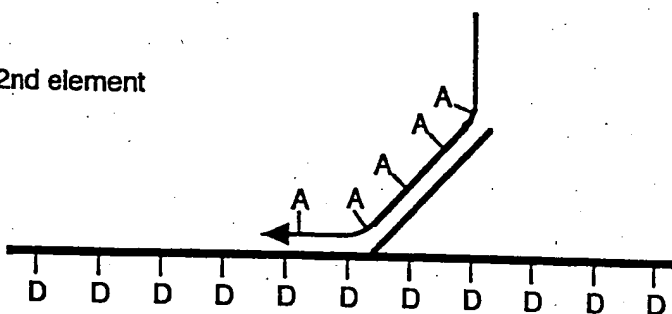
D = Energy Donor

Figure 5

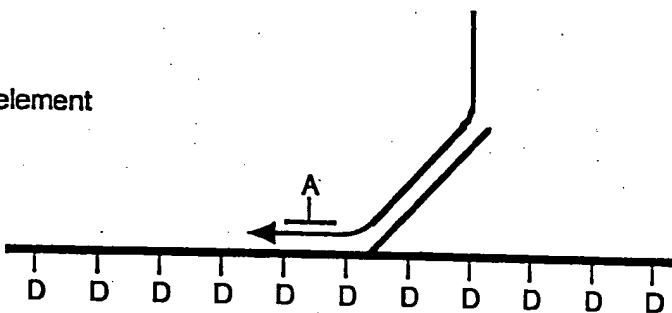
(A) Primer with 2nd element



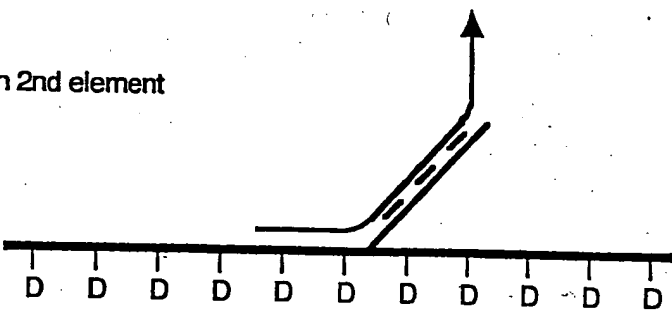
(B) Nucleotide with 2nd element



(B) Probe with 2nd element



(B) Intercalators with 2nd element



D = Energy Donor  
A = Energy Acceptor

Figure 6

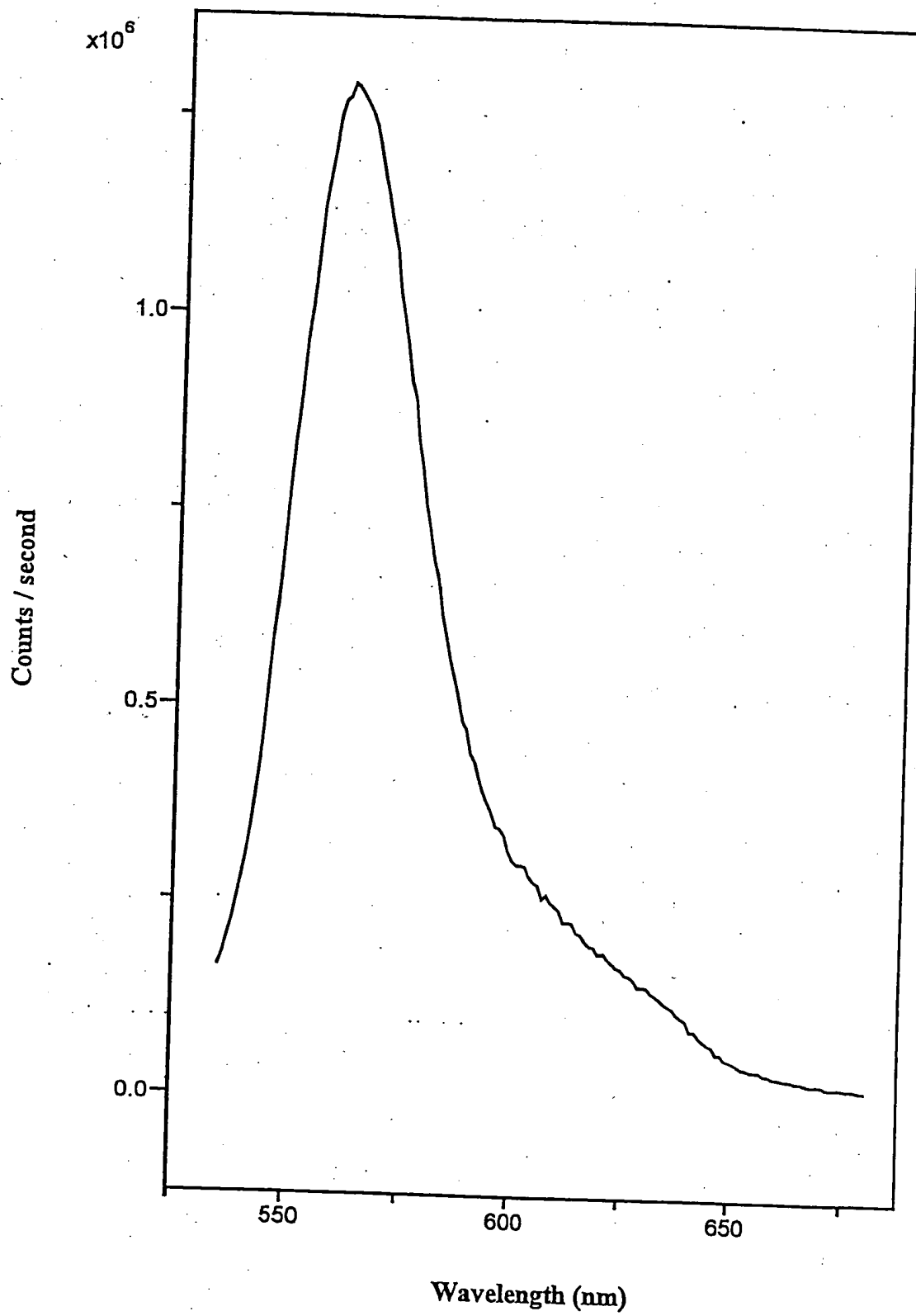


Figure 7



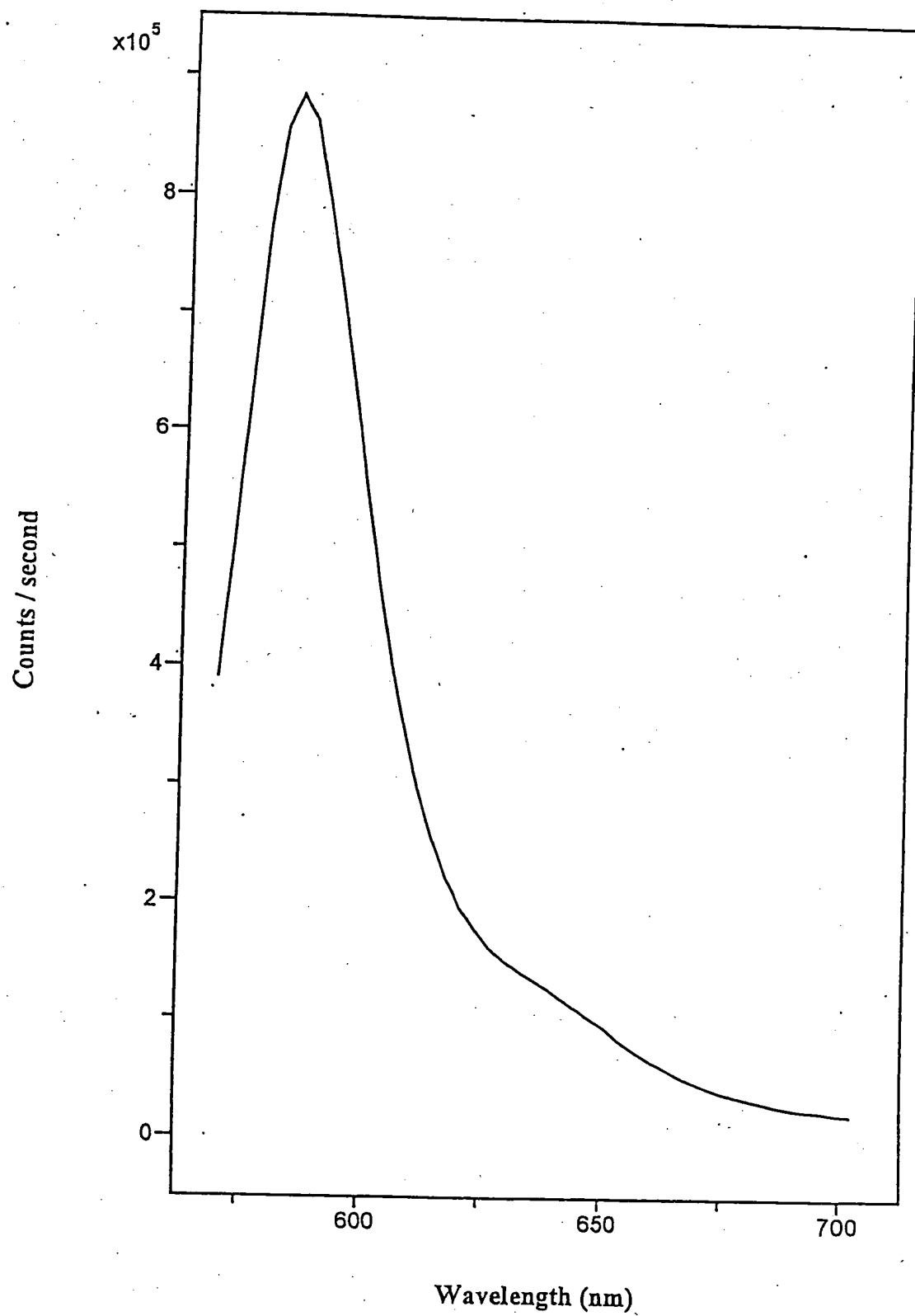


Figure 8

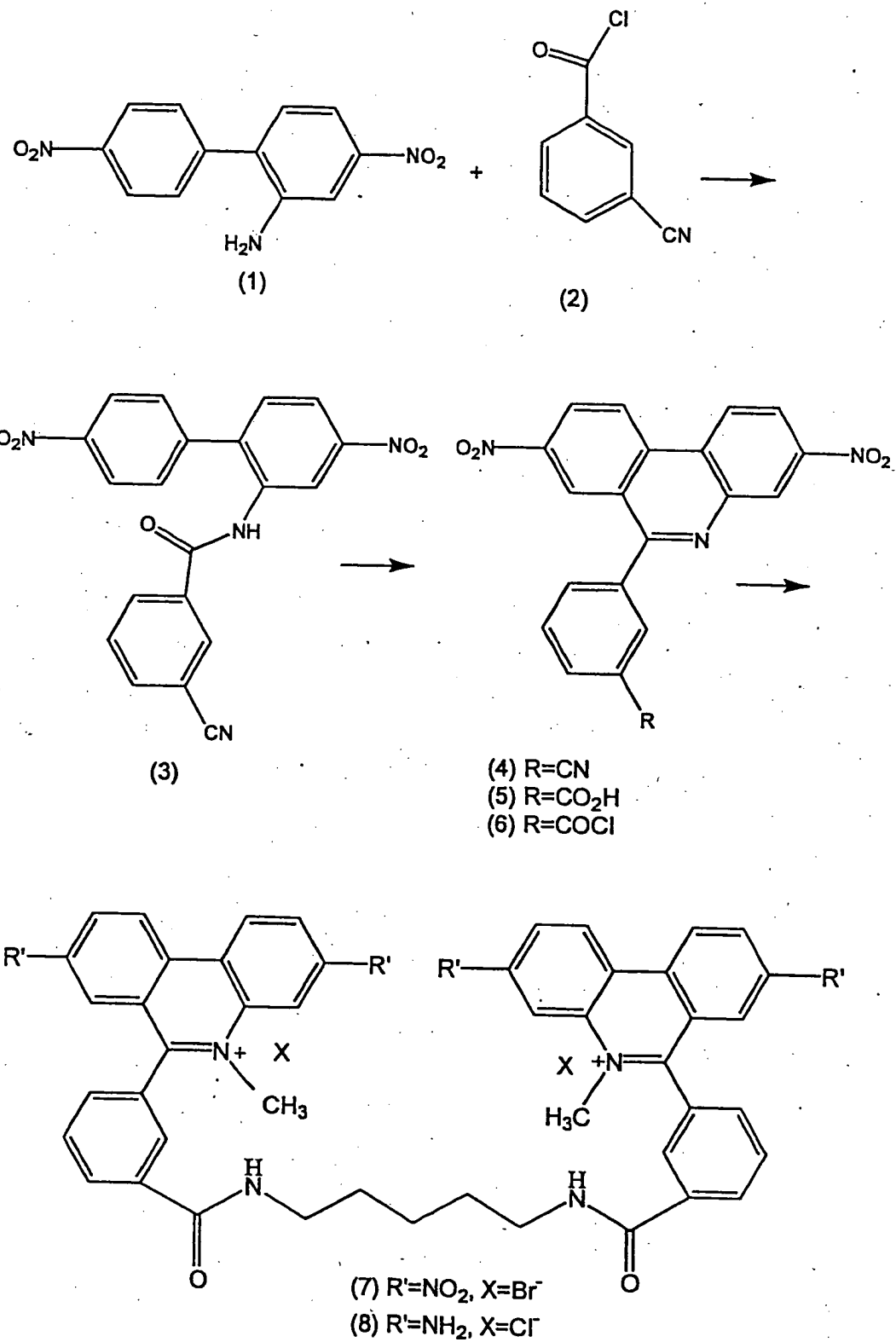
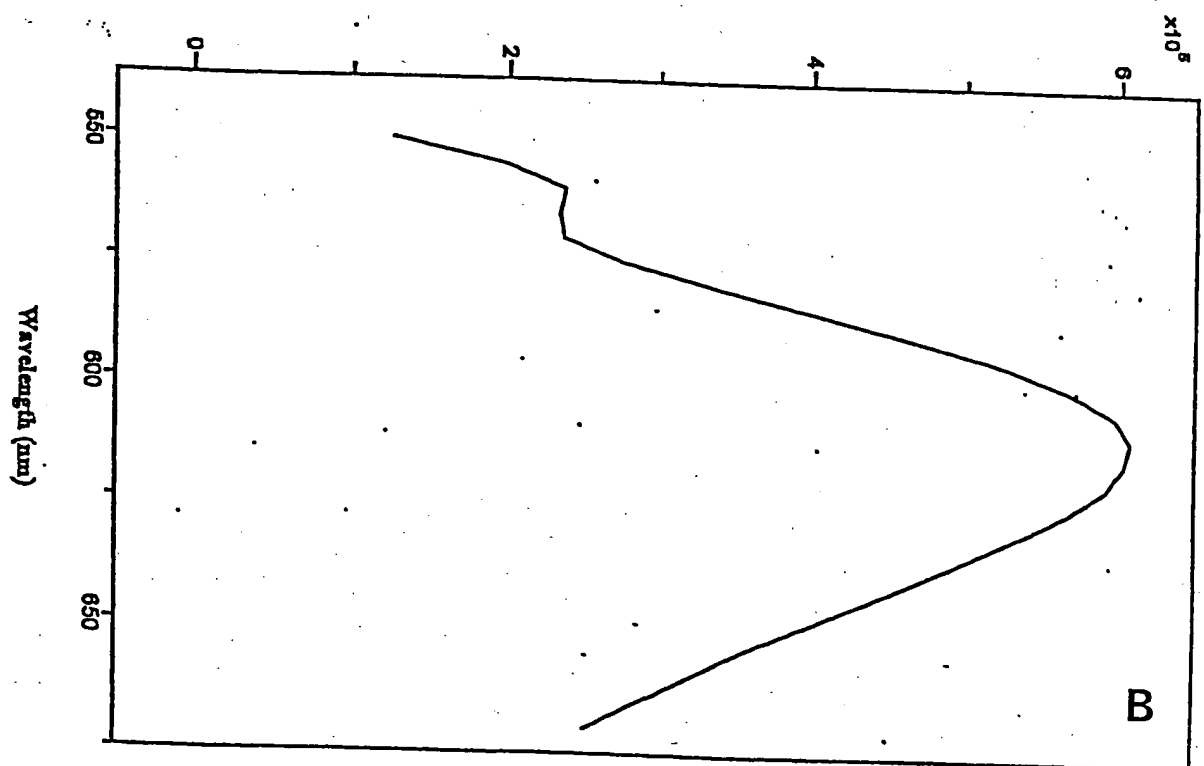
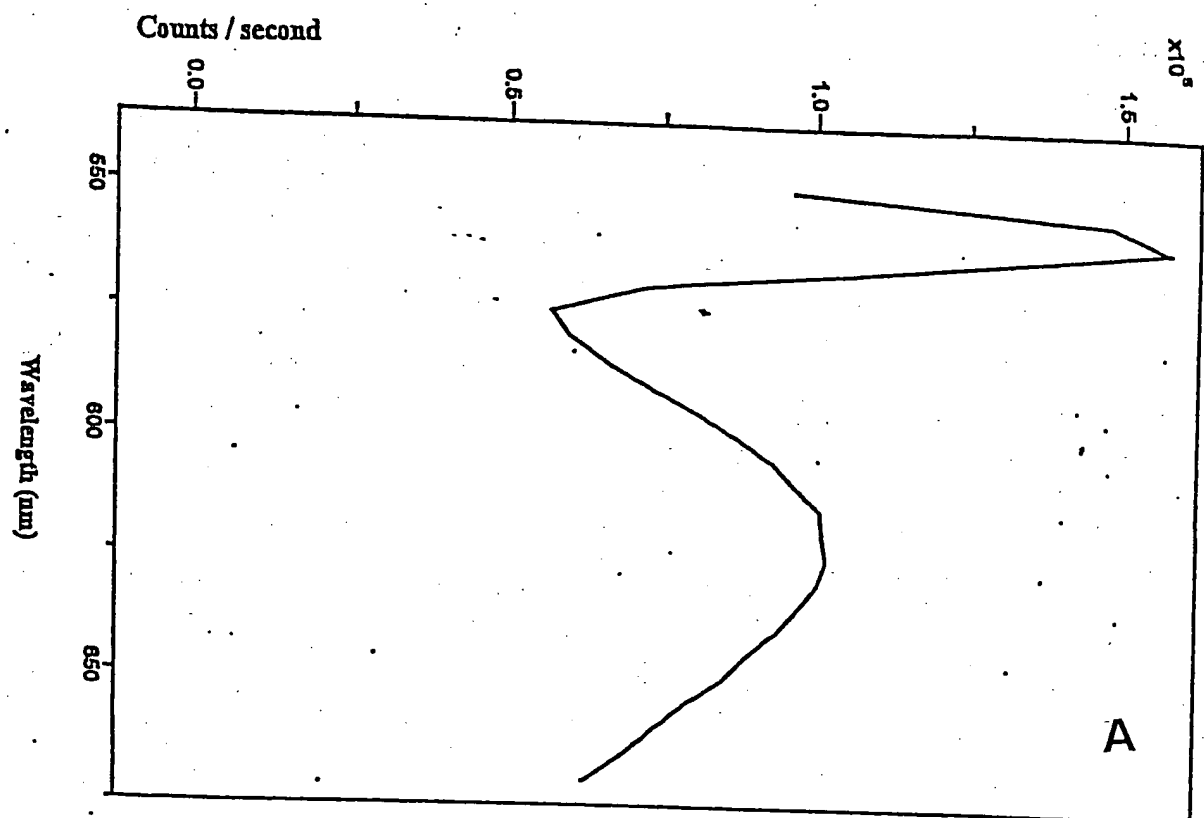


Figure 9



Illumination at 472 nM  
Figure 10

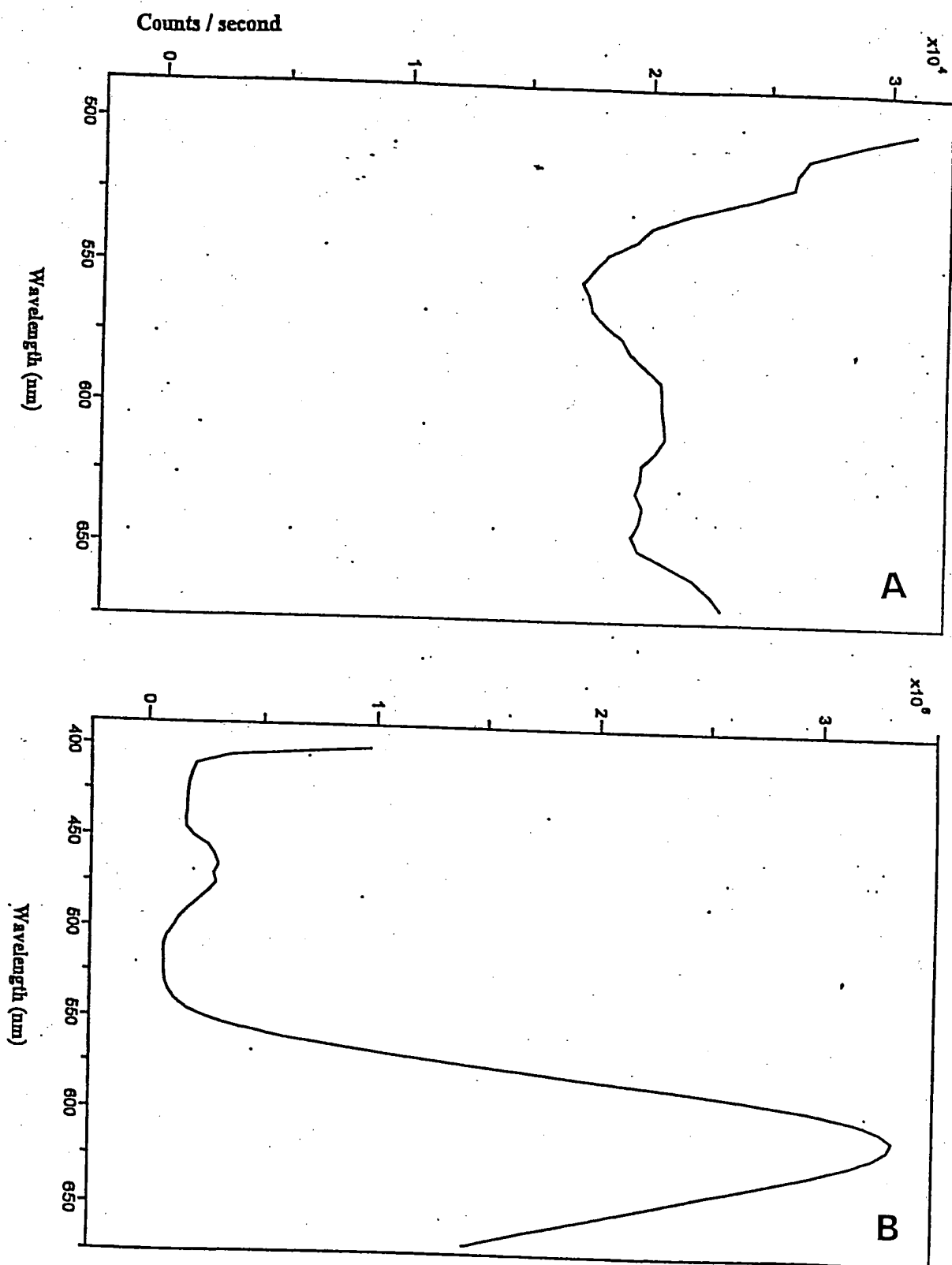


Figure 11

# HIV Anti-sense Amplicon

Forward Primer

catgatccgg atgggagggtg →

Hybridization Probe

taatggtg agtatccctg cctaactct →

catgatccgg atgggagggtg ggtctgaaac gataatggtg agtatccctg cctaactcta ttactatcc ggatgtgc  
gtactaggcc taccctccac ccagactttg ctattaccac tcataggac ggattgagat aagtgatagg cctacacg

← agat aagtgatagg cctacacg

Reverse Primer

Figure 12

[illegible]

## RNase H

Q = Inosine (ribonucleotide)

mRNA  
—————AAAAAAAAAAAAA-3'  
UUUUUUUUUUUTTTTQQQQQQQQ

## Reverse Transcriptase

mRNA  
—————AAAAAAAAAAAAAAAAACCCCCC-3'  
          UUUUUUUUUUTTTTQQQQQQQ

#### D) Removal of CNAC and binding of primer with promoter sequence

mRNA GGGGGGG-promoter-5'  
 ————— AAAAAAAAAAAAAAAAAA CCCCCCCC-3'

Figure 13

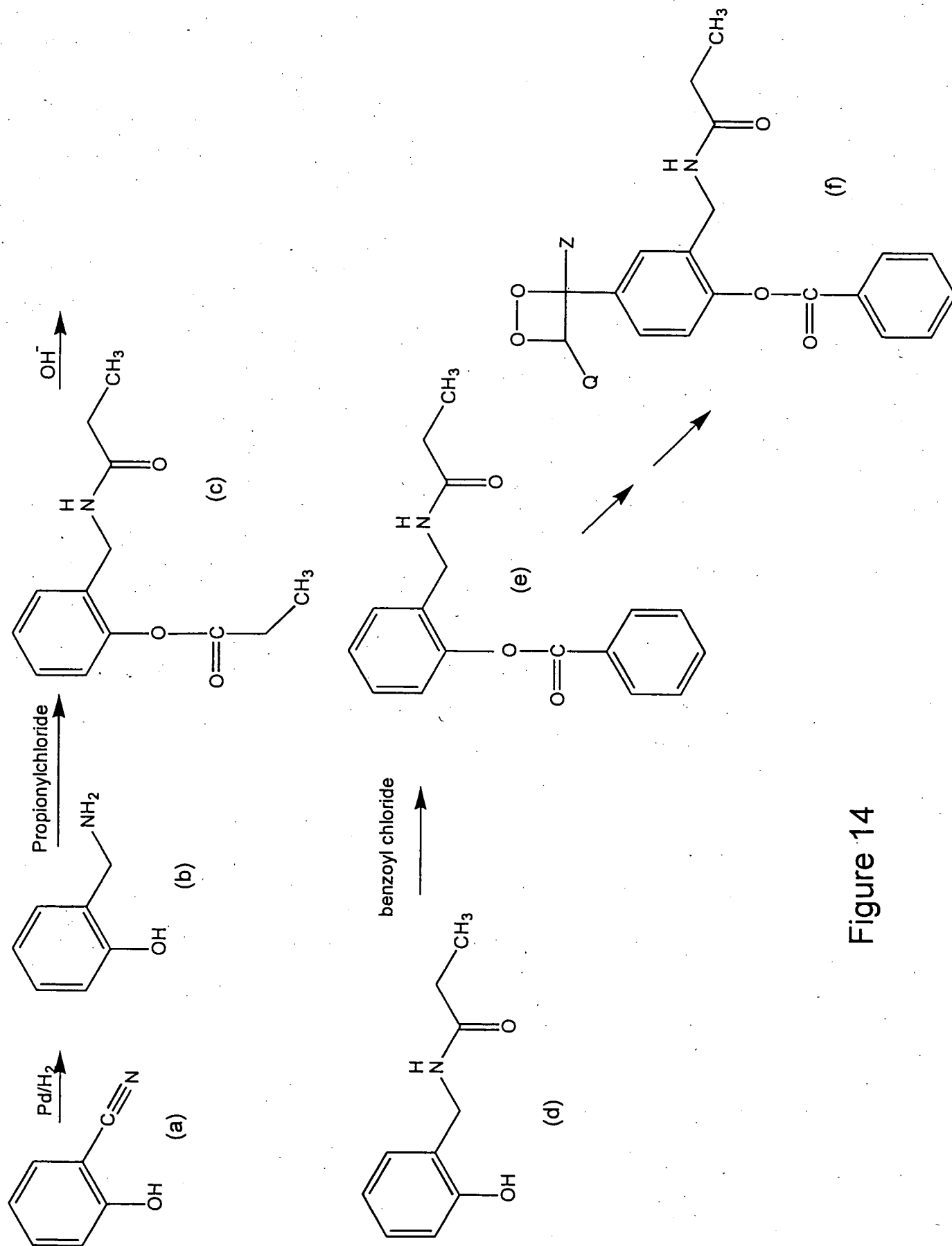


Figure 14

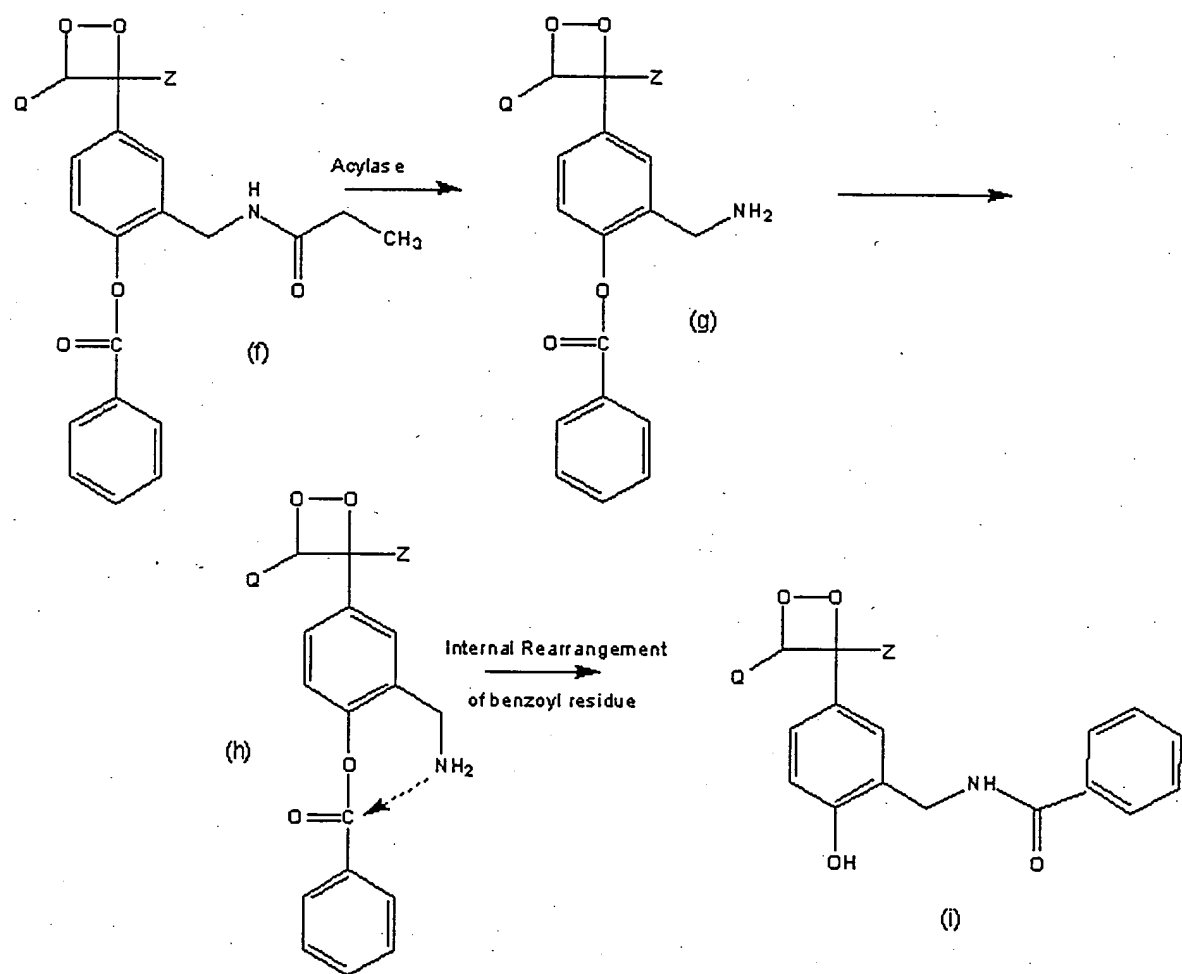


Figure 15